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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,887

08/15/2006

Reinhard Heine

016906-0500

4686

22428 7590 11/24/2010  
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EXAMINER

RUBY, TRAVIS C

ART UNIT

PAPER NUMBER

3785

MAIL DATE

DELIVERY MODE

11/24/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,887	<b>Applicant(s)</b> HEINE, REINHARD	
	<b>Examiner</b> TRAVIS RUBY	<b>Art Unit</b> 3785	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 28-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1 and 28-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2010 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Drawings***

1. The replacement drawings were received on August 24, 2010. These drawings are disapproved.
2. The drawings filed on August 24, 2010 and April 14, 2006 are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the abutment supporting the heat exchanger in a vehicle as recited in Claim 29 and 31 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. The examiner notes that the applicant has submitted new Figure 6 to illustrate an abutment. The examiner fails to see how two rectangles constitute an abutment on a vehicle frame that supports the fan frame and heat exchanger. Thus the newly submitted drawing is not acceptable as it fails to show the required limitations from the claims.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet”

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pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

3. The abstract of the disclosure is objected to because the abstract fails to avoid phrases which can be implied. Correction is required. See MPEP § 608.01(b).
4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. **It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.**

### *Claim Rejections - 35 USC § 112*

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. The term "approximately" in new claim 49 is a relative term which renders the claim indefinite. The term "approximately" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

7. The following is a quotation of the fourth paragraph of 35 U.S.C. 112:

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A claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

8. Claim 49 is rejected under 35 U.S.C. 112, fourth paragraph, as being an improper dependent claim for failing to further limit the subject matter of the claim upon which it depends.

Specifically, Claim 1 recites an arrangement comprising various elements including, for example, a fan frame, in addition to a fan frame, but that claim 49 which depends from claim 1 only requires the fan frame of claim 1 and not the remaining additional elements of the arrangement of claim 1. In order to be a proper dependent claim, claim 49 would need to require all of the elements of claim 1. Applicant should consider rewriting claim 49 so as to avoid any reference to claim 1. See *Pfizer Inc. v. Ranbaxy Labs, Ltd.*, 457 F3d 1284, 1291-92 (Fed. Cir. 2006).

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**10. Claims 1, 28-41, and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valeo Thermique Moteur (FR2778975, as cited by applicant) in view of Heine (US6158500).**

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**Re Claim 1.** Valeo Thermique Moteur teaches an arrangement used for securing a fan frame (ref 14) to a heat exchanger (ref 10), comprising:

a first heat exchanger (ref 10) comprising at least one header (ref 18,20) with holders (ref 58, 60), and

a fan frame comprising a framework (ref 62) with projections (ref 54, 56) and with at least one rib (ref 66);

wherein the holders and the projections are configured to be in operative contact with one another at securing points,

wherein the at least one rib is configured to stiffen the framework (abstract, Figures 1-3).

Valeo Thermique Moteur fails to explicitly teach a tube/rib block and a snap hook wherein the snap hook passes through one of the projections and engages with the projection. Heine teaches a tube/rib block (ref 2; Figure 1; Column 3 lines 11-18) and a snap hook (ref 17) wherein the snap hook passes through one of the projections (ref 20) and engages with the projection (Figures 1, 8, 9). In view of Heine's teachings it would have been obvious to one of ordinary skill in the art at the time of invention to include a snap hook fastener instead of a Valeo Thermique Moteur's fastener since they are art recognized equivalents for the purpose of securing two objects together. In addition it would have been obvious to one of ordinary skill in the art to use a tube/rib block heat exchanger since they are well known in the art.

**Re Claim 28.** Valeo Thermique Moteur teaches at least one additional heat exchanger (ref 12) comprising projections (Figure 1-3, abstract).

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**Re Claim 29.** Valeo Thermique Moteur teaches the first heat exchanger (ref 10) further comprises securing tenons (ref 78, 80),

wherein the fan frame (ref 14) and the at least one additional heat exchanger (ref 12) each comprises at least one supporting device (ref 40, 42),

wherein the securing tenons of the first heat exchanger are configured to support the first heat exchanger on an abutment (Figure 1), and

wherein the at least one supporting device (ref 40, 42) of the fan frame and the at least one supporting device (ref 40,42) of the at least one additional heat exchanger are configured to support the fan frame and the at least one additional heat exchanger, respectively, on the abutment and the projections (Figures 1-3, abstract).

**Re Claim 30.** Valeo Thermique Moteur teaches the securing tenons and the supporting device of the fan frame and/or of the additional heat exchangers are arranged in a common securing region and are integrated in one another (Figures 1-3, abstract).

**Re Claim 31.** Valeo Thermique Moteur teaches the abutment is part of a motor vehicle framework (Figures 1-3, abstract; Since the supporting means are for mounting the heat exchanger in a vehicle, then the abutment must be part of the motor vehicle framework).

**Re Claim 32.** Valeo Thermique Moteur teaches the fan frame (ref 14) and/or the additional heat exchangers are secured solely to the header (ref 18, 20) of the heat exchanger (Figures 1-3, abstract).

**Re Claim 33.** Valeo Thermique Moteur teaches the header (ref 18, 20) is arranged laterally on the heat exchanger (ref 10), and the projections are arranged laterally on the fan frame and/or the additional heat exchanger (Figures 1-3, abstract).

**Re Claim 34.** Valeo Thermique Moteur teaches the projections of the fan frame and/or of the additional heat exchangers and holders of the header are configured to be inserted and/or latched into one another (Figures 1-3, abstract).

**Re Claim 35.** Valeo Thermique Moteur teaches the heat exchanger has another header such that the two headers (ref 18, 20) are arranged on opposite sides of the heat exchanger (Figures 1-3, abstract).

**Re Claim 36.** Valeo Thermique Moteur teaches the rib (ref 66) of the fan frame is arranged between the two headers of the heat exchanger (Figures 1-3, abstract).

**Re Claim 37.** Valeo Thermique Moteur teaches the rib (ref 66) has a length which corresponds to the distance between two headers (Figures 1-3, abstract).

**Re Claim 38.** Valeo Thermique Moteur teaches the rib has a depth which corresponds approximately to a depth of the tube/rib block of the heat exchanger (Figures 1-3, abstract; Figures illustrate the rib extending across the depth of the heat exchanger).



**Re Claim 39.** Valeo Thermique Moteur teaches a depth of the rib is variable along the rib and has a maximum depth at mid-length of the rib (Figures 1-3, abstract; The rib is narrow at the edges and widens as it progresses towards the middle of the fan frame).

**Re Claim 40.** Valeo Thermique Moteur teaches the at least one rib covers the tube/fib block of the first heat exchanger (Figures 1-3 illustrate the rib covering the heat exchanger tube block, abstract).

**Re Claim 41.** Valeo Thermique Moteur teaches the fan frame is produced as a plastic part and the at least one rib can be injection-molded onto the framework (Figures 1-3, abstract; The rib and frame are one integral part).

**Re Claim 47.** Valeo Thermique Moteur teaches the heat exchanger is a coolant cooler (Figures 1-3, abstract).

**Re Claim 48.** Valeo Thermique Moteur teaches the coolant cooler is part of a cooling module for a motor vehicle (Figures 1-3, abstract).

**Re Claim 49.** Valeo Thermique Moteur teaches a framework with an approximately rectangular horizontal cross section (Figures 1-3, abstract).

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**11. Claims 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valeo Thermique Moteur (FR2778975, as cited by applicant) in view of Heine (US6158500) in further view of Ecia Industrie (FR2808870).**

**Re Claim 42.** Valeo Thermique Moteur teaches the at least one header comprises a first header and a second header (figures 1-3) but fails to teach that the first header has the holders and that the second header has the snap hooks, wherein the holders of the first header comprise insertion orifices, wherein the projections comprise insertion tabs on one side of the fan frame and comprise securing tabs with latching orifices on the opposite side, and wherein the insertion tabs are configured for insertion into the insertion orifices such that the fan is configured to be subsequently folded and latched by the snap hooks engaged with the securing tabs.

Ecia Industrie teaches the first header (ref 5) has the holders and the second header (ref 6) has the snap hooks (ref 31, 14), wherein the holders of the first header comprise insertion orifices, wherein the projections comprise insertion tabs on one side of the fan frame (ref 2) and comprise securing tabs with latching orifices on the opposite side (abstract, Figures 1-5), and wherein the insertion tabs are configured for insertion into the insertion orifices such that the fan is configured to be subsequently folded and latched by the snap hooks engaged with the securing tabs (abstract, Figure 5).

In view of Ecia Industrie's teachings, it would have been obvious to one of ordinary skill in the art to modify the fasteners of Valeo Thermique Moteur to be snap hooks and insertion orifices as they are art recognized equivalents of securing two objects together. In addition, it

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would have been obvious to use the fasteners of Ecia Industrie as it allows for easy installation of the fan frame next to the heat exchanger.

**Re Claim 43.** Valeo Thermique Moteur fails to teach that the fan frame further comprises ribbed feet injection-molded onto a lower region of the framework, wherein the at least one header further comprises reception orifices, and wherein the feet can be received into the reception orifices.

Ecia Industrie teaches the securing means of the fan frame are designed as ribbed feet (ref 27, 28, 29) injection-molded onto the framework in the lower region, and in that the holding means on the header are designed as reception orifices (ref 10) and in that the feet can be pushed into the reception orifices (Figure 1-5, abstract).

In view of Ecia Industrie's teachings, it would have been obvious to one of ordinary skill in the art to modify the fasteners of Valeo Thermique Moteur to be ribbed feet and insertion orifices as they are art recognized equivalents of securing two objects together. In addition, it would have been obvious to use the fasteners of Ecia Industrie as it allows for easy installation of the fan frame next to the heat exchanger.

**Re Claim 44.** Valeo Thermique Moteur fails to teach snap hooks arranged on the feet and edges arranged on the reception orifices such that the snap hooks can be latched with the edges.

Ecia Industrie teaches that the snap hooks (ref 31) are arranged on the feet (ref 35) and edges are arranged on the reception orifices (ref 14) and in that the snap hooks can be latched with the edges (Figure 1-5, abstract).

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In view of Ecia Industrie's teachings, it would have been obvious to one of ordinary skill in the art to modify the fasteners of Valeo Thermique Moteur to be snap hooks and insertion orifices as they are art recognized equivalents of securing two objects together. In addition, it would have been obvious to use the fasteners of Ecia Industrie as it allows for easy installation of the fan frame next to the heat exchanger.

**Re Claim 45.** Valeo Thermique Moteur fails to teach that the fan frame further comprises ribbed feet injection-molded onto a lower region of the framework, wherein the at least one header further comprises reception orifices, and wherein one of the feet received into one of the reception orifices forms a fixed bearing, and another of the feet received into another of the reception orifices forms a loose bearing.

Ecia Industrie teaches that the foot with the reception orifice (ref 10) is designed as a fixed bearing and the foot with the reception orifice (ref 31) is designed as a loose bearing (Figure 1-5, abstract).

In view of Ecia Industrie's teachings, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Valeo Thermique Moteur to have a fixed and loose bearing in the reception orifice as this allows for a better connection to be made between the fan frame and header, giving a stronger fan frame that reduces movement.

**Re Claim 46.** Valeo Thermique Moteur fails to teach the fan frame further comprises ribbed feet injection-molded onto a lower region of the framework, wherein the at least one

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header further comprises reception orifices, and wherein the securing tenons are arranged below the reception orifices.

Ecia Industrie teaches the fan frame further comprises ribbed feet injection-molded onto a lower region of the framework, wherein the at least one header further comprises reception orifices, and wherein the securing tenons are arranged below the reception orifices (Figure 1-5, abstract).

In view of Ecia Industrie's teachings, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Valeo Thermique Moteur to have securing tenons arranged below reception orifices as this would allow for a secure connection to be made between the two parts. It would have been obvious to one of ordinary skill in the art at the time the invention was made to locate the tenons below the reception orifices, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

### ***Response to Arguments***

12. Applicant's arguments with respect to claims 1 and 28-49 have been considered but are moot in view of the new ground(s) of rejection.

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***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRAVIS RUBY whose telephone number is (571)270-5760. The examiner can normally be reached on Monday-Friday 9:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Travis Ruby/  
Examiner, Art Unit 3785

/Ljiljana (Lil) V. Ciric/  
Primary Examiner, Art Unit 3785  
for Judy Swann, SPE of Art Unit 3785